

1. Identification

Product Name	Lithium - Ion Battery Pack	
Brand Name	MedXP-300v3, MedXP-300V4	
Manufacturer	Amstron Corporation.	
	28340 Avenue Crocker, Valencia, CA 91355	
	(818) 504-1634	
Document Information	Issue Date : March 28, 2016	
	Version number : Rev. 2	
	Revision Date : Dec 03 . 2020	
	Supersedes Date : Dec 03.2020	

2. Hazard(s) identification

Emergency Overview

Not considered dangerous as manufactured. The potential for exposure should not exist unless the cell or battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. If battery is damaged, exposure to product may cause eye, skin and respiratory tract irritation.

Primary routes of Entry

	Skin contact	No
	Skin absorption	No
	Eye contact	No
	Inhalation	No
	Ingestion	No
Sympto	ms of exposure	
	Skin contact	No effect under routine handling and use
	Skin absorption	No effect under routine handling and use
	Eye contact	No effect under routine handling and use
	Inhalation	No effect under routine handling and use
	Reported as carcinogen	Not applicable

3. Composition/information on ingredients

Hazardous Ingredients	%	CAS Number
Aluminum Foil	2-10	7429-90-5
Nickel compound (proprietary)	0-25	
Manganese compound (proprietary)	0-15	
Cobalt compound (proprietary)	4-50	



Styrene - Butadiene - Rubber	<1	
Polyvinylidene Fluoride (PVDF)	<5	24937 - 79 - 9
Copper Foil	2-10	7440-50-8
Carbon (proprietary)	10-30	7440-44-0
Electrolyte (proprietary)	10-20	
Stainless steel, Nickel and inert materials	Remainder	N/A

UN CLASS

Lithium - Ion Battery Pack

- Transport of dangerous goods, Special Provision 188.

Recommendations on the transport dangerous goods - Model regulations 15th revised edition, IATA Special Provision A154, A164 and IMDG Special Provision 188.

This product passed 1.2M drop test and comply with UN38.3.

4. First -aid measures

Inhalation	Not a health hazard	
Eye contact	Not a health hazard	
Skin contact	Not a health hazard	
Ingestion	If swallowed, obtain medical attention	immediately

IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING, THE FOLLOWING ACTIONS ARE RECOMMENDED;

Inhalation	Leave area immediately and seek medical attention	
Eye contact	Rinse eyes with water for 15minutes and seek medical	
	attention	
Skin contact	Wash area thoroughly with soap and water and seek medical	
	attention	
Ingestion	Drink milk/water and indu ce vomiting; seek medical attention	

5. Fire -fighting measures

General Hazard	Cell is not flammable but internal organic material will burn	
	if the cell is incinerated. Combustion products include, but are	
	not limited to hydrogen fluoride, carbon monoxide and carbon	
	dioxide.	
Extinguishing Media	Use extinguishing media suitable for the materials that are	
	burning.	



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9	Special Fi	irefighting lr	structi	ons		
				If possible, remove cell	l(s) from fire f	ighting area.
				If heated above 125	, cell(s) may	y explode/vent.
F	irefighti	ng Equipme	nt	Use NIOSH/MSHA app	proved full	-face self -contained breathing
				apparatus (SCBA) with	full protectiv	ve gear.
NFPA Ratir	ngs	Health: 0 Fir	e: 0 Rea	activity: 0		
Hazard Sca	ale: 0 = N	1 Ninimal 1	= Moo	derate 3 = Serious 4 = Se	evere	

6. Accidental release measures		
On Land	Place material into suitable containers and call local	fire/police
	department.	
In Water	If possible, remove from water and call local fire/police	
	department.	
7. Handling and storage		

Handling	No special protective clothing required for handling individual
	cells. Avoid damaging or rupturing battery.
Storage	Store in a cool, dry place at room temperature.
	Avoid extreme heat or fire.

8. Exposure controls/personal protection

Engineering controls		Not required under normal product use conditions.
Personal	Protection	
	Respirator	Not required
	Eye/face protection	Not required beyond safety practices of employer.
	Gloves	Not required under normal product use conditions.
		Wear natural rubber gloves when handling a damaged battery.
	Foot protection	Steel toed shoes recommended for large container handling.

9. Physical and chemical properties

State	Solid
Odor	None
рН	N/A
Vapor pressure	N/A
Vapor density	N/A





Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

10. Stability and reactivity

Reactivity	None		
Incompatibilities	None during normal of	operation.	Avoid exposure to heat, open
	flame, and corrosives.		
Hazardous Decomposition F	Products		
	None during normal of	operation con	ditions. If cells are opened,
	hydrogen fluoride and	d carbon mor	noxide may be released.
Conditions To Avoid	Avoid exposure to h	eat and oper	n flame.
	Do not puncture, crus	h or incinerat	te.

11. Toxicological information

This product does not elicit toxicological properties during routine handling and use.

Sensitization	Teratogenicity	Reproductive toxicity	Acute toxicity
NO	NO	NO	NO

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

12. Ecological information

Some materials within the battery are bioaccumulative. Under normal conditions, these mat erials are contained and pose no risk to persons or the surrounding environment.

13. Disposal considerations

California regulated debris RCRA Waste Code Nonregulated Dispose of according to all federal, state, and local regulations.

14. Transport information

Lithium Ion batteries are considered to be "Rechargeable batteries" and meet the requirements of transportation by the U.S. Department of Transportation(DOT), the International Civil Aviation Administration(ICAO), the International Maritime Da ngerous Goods (IMDG) Code.



Even classified as lithium ion batteries (UN3480), 2015 IATA Dangerous Goods Regulations 56th edition Packing Instruction 965 Section IB or II is applied.

The general and additional requirements apply to all lithium ion cells and batteries prepared for transport according to this packing instructions:

1) Section IB applies to lithium ion cells with a Watt -hour ra ting not exceeding 20Wh and lithium ion batteries with a Watt -hour rating not exceeding 100Wh packed in quantities that exceed the allowance permitted in Section IB, Table 965 - IB; and

Table 965 - IB

Contents	Net quantity per package	
	Passenger	Cargo
Lithium ion cells and batteries	10kg	10kg

2) Section II applies to lithium ion cells with a Watt -hour rating not exceeding 20Wh and lithium ion batteries with a Watt -hour rating not exceeding 100Wh packed in quantities not exceeding the allowance permitted in Section II, Table 965 -II.

Table 9 65-II

	Lithium ion cells	Lithium ion cells	Lithium ion batteries
	and/or batteries with	with a Watt -hour	with a Watt -hour
	a Watt -hour rating	rating more than	rating more than
	not more than	2.7Wh, but not	2.7Wh, but not more
Contents	2.7Wh	more than 20Wh	than 100Wh
1	2	3	4
Maximum number of cells /	No line it	0.55%	2 hattariaa
batteries per package	NO IIM IT	8 cells	2 batteries
Maximum net quantity (mass)	2 51.5		- 1-
per package	2.5Kg	n/a	n/a

Cells and/or batteries specified in columns 2,3 and 4 of Table 965 - II must not be combined in the same package.

Each cell or battery is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria Part 3 subsection 38.3.

3) IMO Class Packing group II, IMO Labels: Class 9. Proper shipping name: Lithium - Ion batteries,
UN 3480. IMDG Code: Special provisions 188, 310, 376, 377, 636 and 348 will apply and Packing
Instruction P903, P908, P909 and P910. EmS: F - A, S - I Stowage cate gory A.

The product has been evaluated according to th e UN Manual of Tests and Criteria.

No.	Test Item	Criteria	Result
Test 1	Altitude simulation	-No leakage, venting, disassembly, rupture and no	Pass



Test 2	Thermal test	fire.	Pass
Test 3	Vibration	-Measuring mass before/after each test. (If M>5g,	Pass
Test 4	Shock	less than 0.1%)	Pass
		-Measuring voltage before/after each test. (more	
		than 90%)	
Test 5	External short circuit	-No disassembly, rupture and fire within six hours	Pass
Test 6	Impact	of this test.	Pass
		-Max. temperature should not exceed 170 .	
Test 7	Overcharge	-No disassembly and fire within seven days of the	Pass
		test.	

15. Regulatory information

US Federal Regulations

General Product Information

All components are on the U.S.EPA TSCA Inventory List.

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4)

State Regulations

General Product Information

No additional information available.

Component Analysis - Sta te

None of this product's components are listed on the state lists from CA, MA,

MN, NJ, PA, or RI.

Canadian WHMIS Information

General Product Information

This product has been classified in accordance with the hazard criteria of the

Controlled Products Regulations.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

None

16. Other information

The data in this Safety Data Sheet relates only to the specific product designated herein and does not relate to use in combination with any other product or in any process. This SDS may not meet regulatory requirements in other countries. This information is based on technical information





believed to be reliable. It is subject to revision as a gained.

dditional knowledge and experiences are

REFERENCE

International Chemical Safety Cards(ICSCs) International Occupational Safety and Health Information Centre(CIS) 0710 March 1999

Opinion of the scientific committee on toxicity, ecotoxicity and th e environment(CSTEE) Adopted by the CSTEE during the 43rd plenary meeting of 28 May 2004

UN - Recommendations on the Transport of Dangerous Goods Model Regulations. (ST/SG/AC.10/11/Rev.5/Amend.2)



SAFETY DATA SHEET

	UN38.3 Lithium Battery Test Summary for SPS Inc
	Model No. ENB300
	Brand name : Maxpower300, ENB300, MedXP300, SEVA
1	Battery Manufacturer
	SPS INC.
2	Product Manufacturer
	SPS INC.
	70, TECHNO8 -RO, YUSEONG -GU
	DAEJEON, KOREA 34028
	Contact info : lesley@sps -ltd.com / www.sps-ltd.com
3	UN38.3 Test Lab
	SPS INC.
	70, TECHNO8 -RO, YUSEONG -GU
	DAEJEON, KOREA 34028
	Contact info : kikim@sps -ltd.com
4	Test Report Number
	1303308 - R0001
5	Date of Test Report
	8 March, 2013
6	Description of Cell or Battery
	14.8 V, 19800 mAh, 300 Wh
	Lithium ion battery,
	Model No. ENB300 , MEDXP -300V3, MEDXP -300V4, MEDXP SOFT PACK
	Small, rectangular Fiberboard Box case, 5g
7	UN38.3 Tests Performed and Successfully Passed
	T.1, T.2, T.3, T.4, T.5, T7 (Note that T.6 and T.8 are not applicable to batteries.)
8	Assembled Battery Testing Requirements
	Not Applicable
9	Edition of UN Manual of Tests and Criteria Used
	5 th Revised Edition
10	Name and Title of Signatory





In
HYONAM KIM / R&D Director of SPS Inc.